

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

SKEDCO, INC., an Oregon corporation,

Plaintiff,

No. 03:13-cv-00968-HZ

v.

STRATEGIC OPERATIONS, INC., a
California corporation,

OPINION & ORDER

Defendant.

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HERNANDEZ, District Judge:

Plaintiff Skedco, Inc. brings this action against Defendant Strategic Operations, Inc., alleging that Defendant infringes three claims of United States Patent No. 8,342,652 ("the '852 Patent") which discloses a system for simulating hemorrhages in the training of first responders. The United States, through the Secretary of the Army, owns the '852 Patent. Plaintiff is the sole and exclusive licensee of the '852 Patent under an agreement which also gives Plaintiff the right to bring this action in its own name.

Both parties move for summary judgment on the issues of infringement (both literal and under the doctrine of equivalents), validity (based on anticipation and obviousness), and unenforceability based on inequitable conduct. Plaintiff also moves for summary judgment on Defendant's remaining seventeen affirmative defenses.

For the reasons explained below, I grant Defendant's motion and deny Plaintiff's motion on infringement. I deny the remaining portions of both motions as moot.

BACKGROUND

I. Overview of the '852 Patent

The short description of the '852 Patent is a "Trauma Training System." Ex. A to Sec. Am. Compl. at 1. It was issued by the United States Patent & Trademark Office (USPTO) on January 1, 2013. Id. The abstract describes the invention as follows:

A system for simulating one or more hemorrhages in order to provide a more dynamic and realistic hemorrhage simulation in order to train medical personnel and other critical care givers, such as first responders, medics, and emergency medical technicians (EMTs) on treating hemorrhages. The system includes a reservoir, a flow controller, and at least one conduit connected to at least one simulated wound site wherein the system supplies fluid to the simulated wound site in order to simulate a hemorrhage. The system may further include a plurality of wound sites that have their respective fluid flows controlled by the fluid flow controller. In at least one embodiment, the reservoir and the flow controller are housed within a bag. In at least one embodiment, the system further includes an audio system for providing audio cues to the simulation participants to enhance the realism of the simulation.

Id.

Plaintiff alleges that Defendant infringes Claims 18, 19, and 20 of the '852 Patent. Those claims state:

18. A trauma training system for replicating at least one hemorrhage, said system comprising:

- a collapsible reservoir having a capacity capable of storing fluid;
- a pump in fluid communication with the cavity of said reservoir;
- at least one valve in fluid communication with said pump;
- a controller connected to said pump and said at least one valve; and
- at least one wound site detachably in fluid communication with said valve, wherein fluid is provided to said wound site to simulate a hemorrhage.

19. The trauma training system according to claim **18**, wherein said at least one wound site includes:

- a first wound site conduit connected to said valve;
- a first wound site connected to first wound site conduit;
- a second wound site conduit connected to said valve; and
- a second wound site connected to said second wound site conduit.

20. The trauma training system according to claim **18**, further comprising a container housing said reservoir, said pump, and said at least one valve.

Ex. A to Sec. Am. Compl. at 29 (Col. 14, lines 3-24).¹

¹ All further references to the '852 Patent will be to this Exhibit and will be denoted simply by the column and line number referred to, such as 14:3-24.

II. Claim Construction

At a July 25, 2014 oral argument, I ruled from the bench as to several claim construction disputes. I took the phrase "controller connected to" under advisement and on September 3, 2014, I issued an Opinion construing that phrase. As a result of the oral and written rulings, the controlling constructions of six disputed terms/phrases are as follows:

1. "collapsible reservoir": "a container that flexes or folds as the volume of the container of fluid is drawn out";
2. "pump": "a device that moves or transfers fluid by mechanical action";
3. "cavity of said reservoir": "a hollow or space within the collapsible reservoir";
4. "valve": "a device that regulates, directs, or adjusts the flow of fluid through a passageway by opening, closing, or restricting the passageway";
5. "controller connected to": (a) "controller": "an activation mechanism"; (b) "connected to": "joined, united, or linked to," and thus, the entire phrase "controller connected to" is "an activation mechanism joined, united, or linked to";
6. "wound site": "a simulated injury having an opening through which fluid can flow to simulate a hemorrhage."

III. Defendant's Allegedly Infringing Device

The accused product is Defendant's "Blood Pumping System" ("BPS System"), available in a "Basic Kit" and a "Deluxe Kit." Ex. 3 to Stevick Aug. 14, 2015 Decl. (Stevick Dec. 19, 2014 Inf. Rep.) (ECF 98-3) ² at ¶¶ 16-34 ; see also Ex. D to Ex. 3 to Stevick Dec. 19, 2014 Inf.

² Hereinafter referred to as "Stevick Dec. 19, 2014 Inf. Rep. (ECF 98-3)."

Rep. (ECF 98-3) (printout of webpage from Defendant's website).³ The BPS System is a "medical training device[] designed to simulate a human life threatening hemorrhage." Id. at ¶ 17. The housing of the BPS System includes a reservoir, a pumping component, a battery power unit, a manifold, and outlet hoses that lead to the wound sites. See id. at ¶ 24. The BPS System uses a wireless key fob to activate the pumping component to pump fluid from a reservoir to a wound site which is attached to one of the outlet hoses. Id. at ¶ 25.

STANDARDS

Summary judgment is appropriate if there is no genuine dispute as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a). The moving party bears the initial responsibility of informing the court of the basis of its motion, and identifying those portions of "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any," which it believes demonstrate the absence of a genuine issue of material fact." Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986) (quoting former Fed. R. Civ. P. 56(c)).

Once the moving party meets its initial burden of demonstrating the absence of a genuine issue of material fact, the burden then shifts to the nonmoving party to present "specific facts" showing a "genuine issue for trial." Fed. Trade Comm'n v. Stefanchik, 559 F.3d 924, 927-28 (9th Cir. 2009) (internal quotation marks omitted). The nonmoving party must go beyond the

³ There are several other products Plaintiff alleges infringe Claims 18-20 of the '852 Patent but it is clear that the "BPS System" kits are the basis for the infringement allegations. See Stevick Dec. 19, 2014 Inf. Rep. (ECF 98-3) at ¶ 18 (description of BPS Basic Kit includes two of the other allegedly infringing products); at ¶ 29 (description of BPS Deluxe Kit includes three of the other allegedly infringing products); at ¶¶ 32, 34 (describing two other allegedly infringing products as being based on the BPS Basic Kit).

pleadings and designate facts showing an issue for trial. Bias v. Moynihan, 508 F.3d 1212, 1218 (9th Cir. 2007) (citing Celotex, 477 U.S. at 324).

The substantive law governing a claim determines whether a fact is material. Suever v. Connell, 579 F.3d 1047, 1056 (9th Cir. 2009). The court draws inferences from the facts in the light most favorable to the nonmoving party. Earl v. Nielsen Media Research, Inc., 658 F.3d 1108, 1112 (9th Cir. 2011).

If the factual context makes the nonmoving party's claim as to the existence of a material issue of fact implausible, that party must come forward with more persuasive evidence to support his claim than would otherwise be necessary. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587 (1986).

DISCUSSION

I. Infringement - Generally

A patent holder has the right "to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States[.]" 35 U.S.C. § 154(a)(1). A party infringes a patent if, "without authority," it "makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent[.]" 35 U.S.C. § 271(a).

A device can infringe a patent literally or under the doctrine of equivalents. E.g., Energy Transp. Grp., Inc. v. William Demant Holding A/S, 697 F.3d 1342, 1352 (Fed. Cir. 2012) (noting that a device that does not literally infringe a claim may still infringe under the doctrine of equivalents), cert. denied, 133 S. Ct. 2010 (2013). Infringement analysis involves two steps. Grober v. Mako Prods, Inc., 686 F.3d 1335, 1344 (Fed. Cir. 2012). First, the court determines

the scope and meaning of the patent claims through the claim construction process and second, the claims as construed are compared to the allegedly infringing device. Id. (citing Cybor Corp. v. FAS Tech., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc)). The two-step analysis applies to both literal infringement and infringement under the doctrine of equivalents. Deering Precision Instruments, LLC v. Vector Distrib. Sys., Inc., 347 F.3d 1314, 1322 (Fed. Cir. 2003). As indicated above, the step one claim construction occurred in this case in 2014. As to step two, "[p]atent infringement, whether literal or by equivalence, is an issue of fact, which the patentee must prove by a preponderance of the evidence." Siemens Med. Sols. USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc., 637 F.3d 1269, 1279 (Fed. Cir. 2011).

II. Literal Infringement

To establish literal infringement, "every limitation set forth in a claim must be found in an accused product, exactly." Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc., 699 F.3d 1340, 1356 (Fed. Cir. 2012) (internal quotation marks omitted). In response to Plaintiff's infringement allegations, Defendant targets Claim 18 and then asserts that the BPS System does not infringe Claims 19 and 20 because they depend from Claim 18. A dependent claim cannot be infringed if the independent claim is not infringed. Wahpeton Canvas Co. v. Frontier, Inc., 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

Defendant's arguments focus on Elements 3- 4 of Claim 18. Defendant does not contest that the BPS System meets Elements 1 and 2. But, as to Elements 3 and 4, Defendant contends that the BPS System does not have the requisite valve or if it does, that valve is not "connected to" a controller. The BPS System has manually adjustable valves on each outlet hose between the housing system and the wound site. It also has a pump. Because the arguments differ as to

the manually adjustable valves and the interior pump valves, I discuss them separately.

A. Manually Adjustable Valves

Plaintiff argues that Element 3, requiring "at least one valve in fluid communication with said pump," is met by the BPS System because the adjustable valves are in fluid communication with the pump.⁴ Defendant does not dispute that the manually adjustable valves are in fluid communication with the pump. Ex. 2 to Guentzler Aug. 21, 2015 Decl. (Guentzler Jan. 22, 2015 Reb. Inf. Rep.) (ECF 104-2) at ¶ 43 ("The adjustable valves [] are in fluid communication with the pump of the BPS through the blood supply line which is connected to the four-way manifold, which is in turn connected to the pump."). Thus, there is no dispute that the BPS System's manually adjustable valves meet Element 3.

Defendant argues, however, that the manually adjustable valves do not meet Element 4 which claims "a controller connected to said pump and said at least one valve[.]" Defendant's argument is premised on its position that the "controller connected to" phrase in Element 4 requires direct physical control of the valve by the controller and a direct physical connection between the two. Defendant's expert Dr. William Guentzler states his opinion that in the BPS System, "[t]he controller is not connected to the manually adjustable valves" because "[t]he adjustable valves are manually adjusted by the rotation of the valve handle" and they are "connected to the end of the blood supply line." *Id.* at ¶¶ 70. Defendant contends that the flow of fluid through the manually adjustable valves is controlled by the manual adjustment of those valves, not by the controller which is not "connected to" "said valve."

⁴ During the relevant time period, the BPS System used four different pumps which the parties refer to as Pumps A-D. Unless differentiation is required, I refer to the BPS System "pump" in the singular with the understanding that my reference includes all four pumps.

Plaintiff argues that Defendant's position requiring direct physical touching is inconsistent with the plain, ordinary meaning of the term "linked." As examples, Plaintiff notes that a key fob is "linked" to a car's locks, lights, horn, ignition, and other related systems even absent direct wiring to those components. Because the construction of "connected to" includes "linked," Plaintiff argues that the manually adjustable valves are indeed "connected to" the controller because there is no dispute that the valve is in fluid communication with the pump via tubing, and the pump is electrically connected to the controller by wires.⁵ In other words, because A (valve) is physically connected to B (pump) and B (pump) is physically connected to C (controller), then A is "connected to" C, albeit indirectly.

Defendant suggests that because, in the claim construction phase, I rejected Plaintiff's proposed definition for "connected to" which was "interacting directly or indirectly with," I construed the phrase to require a physical connection and direct physical control by the controller for the valve independently of the pump. As indicated above, Plaintiff relies on an indirect connection. I agree with Defendant and thus conclude that the manually adjustable valves do not literally infringe Claim 18 because the manually adjustable valves are not "connected to" an "activation mechanism."

The claim language supports that the controller/activation mechanism must be connected

⁵ Plaintiff's expert Dr. Glen Stevick explains that in the BPS System, a battery power unit is wired to a plastic box containing a circuit board which is in turn wired to the pumping component via a terminal block. Stevick Dec. 19, 2014 Inf. Rep. (ECF 98-3) at ¶ 24. A wireless key fob, when depressed, activates the pumping component to pump fluid from the reservoir to a wound site attached to one of the outlet hoses. *Id.* at ¶ 25. See also id. at ¶ 68 ("the controller is linked to the pump portion of the pumping component by a pair of wires connected to the terminal block and a second pair of wires connecting from the terminal block to an electric motor that drives the pump portion to pump fluid").

to the pump and independently connected to the valve. The claim recites the need for a pump, then a valve in fluid communication with the pump. The claim then requires a controller/activation mechanism to be connected to the pump and the valve. If the claim allowed for an indirect connection between the valve and the controller/activation mechanism, it would not have expressly required that "a controller" be "connected to . . . said . . . valve." Because the connection between the pump and valve was already claimed by the "in fluid communication with" language in Element 3, there was no need to claim a second connection between the controller/activation mechanism and the valve in Element 4 if an indirect connection between the controller/activation mechanism and the valve sufficed. The fact that Element 4 requires a connection between the controller/activation mechanism and the valve as well as between the controller/activation mechanism and the pump establishes a requirement of an independent, direct connection between the controller/activation mechanism and the valve.

Other parts of the patent support this conclusion. As I noted in my September 3, 2014 Opinion, several of the Patent Figures show solid lines connecting the controller/activation mechanism directly to the valve. Sept. 3, 2014 Op. at 21-22 (citing Figs. 2A, 2B). Although I noted that the solid lines did not necessarily reveal an electrical connection, there is no dispute that Figures 2A and 2B show a physical connection between the controller/activation mechanism and the valve independent of the connection between the controller/activation mechanism and the pump. '852 Patent, Figs. 2A, 2B. Figure 6C also shows the controller/activation mechanism physically connected to the valve. '85s Patent, Fig. 6C; see also. Sept. 3, 2014 Op. at 22 (describing Figure 6C and noting presence of apparent wire connection but remarking that the connection was not identified as an electrical one). Similarly, Figure 5 also shows a direct,

physical connection between these components. '852 Patent, Fig. 5 (showing a direct physical connection between the activation mechanism/controller (126) and the valve (124)).

In my September 3, 2014 Opinion, I rejected Defendant's proposed construction of "connected to" to the extent it limited the phrase to an electrical connection. I observed there that the '852 Patent uses "connected to" to show physical, but not necessarily electrical, connections. Sept. 3, 2014 Op. at 20 (noting that Claim 19 claimed a "first wound site conduit connected to said valve" which disclosed a physical attachment of the conduit to the valve and the wound site but not an electrical connection); see also 11:60-64 (Claim 3 disclosing a wound site and using "connected to" several times to mean a physical, non-electrical connection); 12:26 (Claim 8 disclosing a "back flow container connected to said back flow conduit" which describes a physical, non-electrical connection); 12:36 (Claim 9 disclosing a "refill conduit connected to said second branch" which describes a physical, non-electrical connection); 12:47 (Claim 12 disclosing a "plurality of conduits connected to said manifold for connection to a wound site" which describes a physical, non-electrical connection). Because the '852 Patent uses the phrase "connected to" in many places to describe non-electrical connections, and because the law prefers a construction that can be applied consistently throughout the patent claims, I declined to limit the phrase to an electrical connection. Sept. 3, 2014 Op. at 25-26.

In that Opinion I also rejected the "electrical" limitation because the '852 Patent disclosed the alternative use of manually adjustable valves which did not require an electrical connection to operate. Sept. 3, 2014 Op. at 24-25. I noted that the '852 Patent disclosed the use of "needle valves" which were used for fluid volume control for respective wound sites. Id. at 24 (discussing Figures 4 and 5). I further quoted from the specification's description of the flow

controller in Figure 5 which disclosed that certain valves could be manually controlled instead of electrically controlled. Id. (quoting 6:30-44).

I acknowledged Defendant's contention that the references to manually adjustable "needle valves" disclosed valves that are not depicted as "connected to" a controller. Id. at 25 ("As I understand Defendant's argument, the manually operated valves are independent of and not connected to a controller. But, [Defendant argues,] once the invention discloses a valve connected to a controller, it is an electrical connection"). However, I then referred to the specification's description of Figure 5 to explain that the '852 Patent's references to manually adjustable valves were not limited to the "non-controller-connected" needle valves. Id. at 25. Thus, I concluded that because the Figures and the specification disclosed the option of manually adjustable valves which were not electrically controlled by the controller, the phrase "connected to" in Element 4 of Claim 18 should not be limited to an electrical connection. Id. Because of the many references to "connected to" in the '852 Patent, some of which did not include an electrical connection, and because some valves could be controlled manually and not by the activation mechanism/controller, it was improper to limit the phrase "connected to" to an electrical connection. Id. at 25-26.

Importantly, my construction did not reject the notion that the phrase "connected to" required a physical connection. As Defendant notes, I rejected Plaintiff's proposed construction which allowed for an "indirect" connection and which I found vague and overly broad. Instead, I adopted Defendant's construction, omitting the electrical connection, of "joined, united, or linked to" because the claim language and the intrinsic evidence of the Figures and the specification supported a physical connection.

Presently, I have again reviewed the entire '852 Patent including, for the purposes of this discussion, revisiting the significance of the disclosed option of manually adjustable valves. I believe that I erroneously suggested in the September 3, 2014 Opinion that the "manually adjustable valves" depicted in Figures 4 and 5 and referred to in the specification's description of those Figures, could be something other than the distinguishable "non-controller-connected" needle valves.

Figure 4 shows a valve (124) and then the presence of two other valves, designated at 124F for foot and 124UB for upper body. I refer to the latter valves as "sub" valves. The specification refers to these as "needle valves." 5:32. They allow "for fluid volume control." 5:42. Figure 5 is a much more involved illustration of the invention's ability to provide fluid to multiple extremities. 5:53-55. As depicted in Figure 5, the flow controller includes a valve (124). 6:22-29. That valve (124) is "on when activated by a controller (or switch) **126** that completes the circuit with the power supply **130**." 6:27-29. Thus, at this point, the specification discloses that the valve, consistently denoted as "124" is physically connected to the controller and is activated by that controller. Figure 5, as indicated above, shows a direct physical connection between the controller/activation mechanism and the valve designated as 124.

Continuing on, the specification discloses the presence of "sub" valves, denoted as 1241-1246, that connect to a manifold either directly or through a conduit. 6:33-36. These "sub" valves are independently controlled by individual switches or a control matrix for sending control signals to these valves. 6:36-38. The switches "complete the electrical circuit between the respective valve **1241-46** and the power supply." 6:38-40. Figure 5 makes clear that in contrast to the "valve" denoted as 124, these "sub" valves are not directly connected to the

controller/activation mechanism.

When Figures 4 and 5 are examined together, they show that these "sub" valves are in fact the "needle" valves referred to in the specification's description of Figure 4 because they are not the main valve, denoted as 124, but are the individual valves for each independent wound site. Accordingly, I erred when I remarked that Defendant's argument regarding the manually adjustable valves "overlooked" the disclosure of manually adjustable valves which were not "needle valves." The fact that the '852 Patent discloses manually adjustable "sub" or "needle" valves used on individual wound site conduits does not undermine a conclusion that Element 4 of Claim 18, requiring a "controller connected to said pump and said at least one valve," discloses a direct physical connection between the connector/activation mechanism and the valve.

The BPS System's manually adjustable valves are not directly connected to the "controller." Additionally, while I adhere to my previous conclusion that the "connected to" phrase should not be limited to an electrical connection based on the patent's multiple uses of the phrase in contexts which clearly do not disclose an electrical connection, the valve disclosed in Claim 18 is the "main" valve, consistently denoted in the Figures and the specification as "124" and which is connected to and controlled by the controller.⁶ Because the BPS System's manually adjustable valves are not physically connected to the controller and are not controlled by the controller, the BPS System's manually adjustable valves do not exactly meet the limitation disclosed in Element 4 of Claim 18 of the '852 Patent. Thus, there is no literal infringement by

⁶ To the extent this is a change in my previous claim construction, I note that "district courts may engage in a rolling claim construction, in which the court revisits and alters its interpretation of the claim terms as its understanding of the technology evolves." Pressure Prods Med. Supplies, Inc. v. Greatbatch Ltd., 599 F.3d 1308, 1316 (Fed. Cir. 2010) (internal quotation marks omitted).

the manually adjustable valves. This conclusion also disposes of Plaintiff's allegations that Claims 19 and 20 are infringed by the BPS System.

B. Internal Pump Valves

As an alternative to its argument based on the manually adjustable valves, Plaintiff argues that the BPS System literally infringes Claims 18-20 of the '852 Patent based on the valves internal to Pumps A-D. The issue is whether Pumps A-D can fulfill the "pump" element as well as the "valve" element or whether they fulfill only the "pump" element.

The claim language supports a conclusion that the pump and the valve are separate devices. By disclosing a "pump" in Element 2 and separately disclosing a "valve" in Element 3, the language in Claim 18 suggests that these are two independent devices. My claim construction further supports a conclusion that these are separate devices because they perform distinct functions. "Pump" is "a device that moves or transfers fluid by mechanical action." In contrast, the "valve" does not actually move or transfer the fluid but instead is "a device that regulates, directs, or adjusts the flow of fluid through a passageway by opening, closing, or restricting the passageway." By defining each of these claim components as a "device" and by defining each as performing a distinct function different from the other, the claim construction indicates that the pump and the valve disclosed in Claim 18 are separate devices. Additionally, the Figures that show the valve delineated as 124 show it as a physically separate component from the pump. '852 Patent, Figs. 2A, 2B, 2C, 3, 5, 10. Thus, the patent claim language, the drawings, and the claim construction all support a conclusion that the valve claimed in Claim 18 is a distinct physical structure, separate from the pump.

In support of its argument that Pumps A-D infringe Claim 18, Plaintiff argues that Pumps

A-D are structures that contain internal components which satisfy both the "pump" and "valve" limitations as construed in claim construction. Dr. Stevick separately deconstructed each of the four pumps. For Pumps A-C, he asserts that the "pump" portion of the structure operates independently to move fluid by mechanical action and the "valve" independently prevents back flow of fluid when the pump portion of the structure is not in operation, by regulating the flow of fluid. Stevick Dec. 19, 2014 Inf. Rep. (ECF 98-3) at ¶¶ 53-63. As for Pump D, Dr. Stevick asserts that

each tooth of each gear is a backflow-preventing valve where the tooth meshes with teeth of the adjacent gear, and each such valve closes and opens once on each rotation of the gears. The "valve" portion independently prevents back flow when the "pump" portion is not in operation.

Id. at ¶ 65.

Dr. Guentzler opines that the function of Pumps A-D is destroyed when the structures are deconstructed and the "valve" portions removed. Ex. 4 to Guentzler Aug. 21, 2015 Decl. (Guentzler July 13, 2015 Supp'l Reb. Rep. re: Inf.) (ECF 104-4) at ¶ 24 (when inlet valve assembly of Pump A removed, Pump A transferred fluid in a "substantially degraded manner"; reciting differences in volume and PSI); at ¶¶ 35, 37 (when backflow prevention valve assembly of Pump B removed, Pump B fluid reversed back through the pump and Pump B did not perform as designed); at ¶¶ 51-53 (when "outlet" valve of Pump C removed, Pump C did not pump fluid); at ¶¶ 57-66 (Pump D is a "gear pump" with no internal "valve" component; testing occurred by removing a certain number of gears; Pump D cannot transfer fluid with one or two gears removed).

Dr. Stevick disagrees, although his own testing showed a decrease in the effectiveness of

Pumps A and C when their internal inlet or outlet valve components were removed. Ex. 5A to Stevick Aug. 14, 2015 Decl. (Stevick July 24, 2015 Supp'l Reb. Rep. re: Inf.) (ECF 98-5A) at ¶¶ 5-7.

Despite the differing expert opinions, I agree with Defendant that Pumps A-D do not satisfy the pump and valve elements of Claim 18. For the purposes of this Opinion, I accept Dr. Stevick's opinion that Pumps A-C each have valve components that may be separated from pump components. I further accept his opinion that Pump D's gear teeth act as backflow-preventing valves. I also accept that even with these valve components removed, the pumps operate. Nonetheless, the "valve" components in Pumps A-D do not satisfy the "valve" limitation in Claim 18.

The valve components of Pumps A-D "regulate" the fluid only within the pumps themselves. The valve disclosed in Claim 18 is separate from the pump because the valve, as discussed above, is separately and independently connected to the controller/activation mechanism. And, while the components of Pumps A-D may be disassembled for the purposes of testing the operation of those pumps absent the "valve" portion, the BPS System does not use Pumps A-D with the components taken apart. Thus, even though the components can be separated for testing, the "valve" portions of Pumps A-D actually function as part of the pump. Each Pump A-D is a single device that has internal components that prevent backflow into the pump so that the pump will function efficiently to move fluid by mechanical action. Pumps A-D do not have an independent valve.

In Powell v. Home Depot USA, 663 F.3d 1221 (2011), the Federal Circuit considered an infringement claim regarding a saw guard. The court first reviewed the claim construction of

"dust collection structure" and agreed with the district court the "dust collection structure" was not a means-plus-function limitation. Id. at 1231. In appealing the jury's determination of literal infringement, the defendant argued that even under the court's claim construction for "dust collection structure," there was no infringement. Id. The defendant contended that the terms "cutting box" and "dust collection structure" were distinct terms which could be infringed only by a device with separate structures corresponding to distinct claim elements. Id. It contended that when a claim lists elements separately, the accused device cannot infringe if it does not also contain separate elements corresponding to the separate claimed elements. Id.

The court rejected that argument. The court looked to the patent specification which defined the cutting box as an "internal chamber wherein the rotating saw blade meets the work piece during the cutting process and functions to contain the sawdust and wood chips generated as the blade cuts through the wood." Id. (emphasis added). Based on this language, the court concluded that the specification taught "that the cutting box may also function as a 'dust collection structure' to collect sawdust and wood chips generated during the wood cutting process." Id. at 1231-32. The specification did not suggest that the claim terms required separate structures. Id. at 1232. Because the experts for both the plaintiff and the defendant agreed that the rear portion of the cutting box of the accused device was a place where sawdust and wood chips generated by the cutting process could collect and further agreed that the rear portion of the cutting box contained a port for allowing the extraction of sawdust and wood chips, the district court's two requirements for a dust collection structure were embodied within the accused product. Id.

Powell distinguished Becton, Dickinson & Co. v. Tyco Healthcare Group, LP, 616 F.3d

1249 (Fed. Cir. 2010). In Becton, Dickinson, the issue was whether a "springs mean" limitation in a safety needle was a separate structural element from a hinged arm. The Federal Circuit reversed the jury's verdict of infringement, agreeing with the defendant that the accused products did not literally infringe the patented invention because they lacked the added spring member required by the asserted claims. Id. at 1253. The appellate court concluded that the district court erred when it held that the claim construction did not require a spring means that was a distinct structural element from the hinged arm. Id. at 1254.

First, the appellate court noted the "unequivocal language" of the claims which required a spring means separate from a hinged arm. Id. It found that because the claim listed the element of the hinged arm separately from the spring means, the claim instructed that these were separate structures. Id. The court explained that "[w]here a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention." Id. (internal quotation marks and brackets omitted).

Second, the court looked to the specification which confirmed that the spring means was a separate element from the hinged arm. Id. It found that the only elements disclosed in the specification as "spring means" were separate structures from the hinged arm and its hinges. Id.

Next, the court found that the plaintiff's argument that the two components could be the same structure would render the asserted claims nonsensical. Id. at 1255. Because one claim described the spring means as being connected to the hinged arm and another claim described it as "extending between" the hinged arm and a mounting means, if the hinged arm and the spring means were one and the same, then the hinged arm would be connected to itself and must extend between itself and a mounting means which was a physical impossibility. Id. Finally, the court

held that if the hinged arm and the spring means were not separate structures, then the asserted claims would be invalid over the prior art. Id. Because the unequivocal language of the patent at issue required both a hinged arm and a spring means, there was no literal infringement by the defendant's products which did not contain a spring means as a separate structural element from the hinged arm and its hinges. Id. at 1255-56.

The Powell court distinguished Becton, Dickinson because in Becton, Dickinson, the claim language suggested that the two components were not the same structure and the specification confirmed that they were separate elements. Powell, 663 F.3d at 1231. The Powell court observed that based on the intrinsic record in Becton, Dickinson, the terms "hinged arm" and "spring means" were construed to require separate structures. Id. In contrast, the Powell court explained, the intrinsic record of the saw guard patent indicated that the claim terms did not require separate structures and thus, the accused device's "cutting box" that had a "front half" that met the cutting box limitation and a "rear half" that met the "dust collection structure" limitation literally infringed. Id. at 1231-32.

Plaintiff in the instant case relies on Powell. Defendant relies on Becton, Dickinson. I agree with Defendant that Becton, Dickinson is the more analogous case. First, contrary to Plaintiff's assertion, Becton, Dickinson is not distinguishable from the instant case based on the fact that the claim at issue there was a means-plus-function claim. The Becton, Dickinson court expressly refused to reach the defendant's argument that a separate spring was required because the spring means limitation was in means-plus-function format under 35 U.S.C. § 112, ¶ 6. 616 F.3d at 1253 n.3 ("We need not reach this argument, however, because we conclude that - regardless of whether the asserted claims invoke section 112, paragraph 6 - an added spring

element is required by the plain language of the claims.") (emphasis added).

Second, Powell teaches that the specification can overcome the "clear implication" of distinct components created by claim language listing separate structures in separate elements. But, Powell does not stand for the proposition that such claim language is to be disregarded or fails to create a presumption of separate structures. As noted above, the claim language of Claim 18 of the '852 Patent supports a conclusion that the pump and the valve are entirely separate structures.

Both Becton, Dickinson and Powell indicate that claim language and the patent specification inform whether separately delineated devices or structures must be present as separate structures in an accused device. Unlike Powell, where the specification taught that the cutting box structure could in fact include the dust collection structure, the '852 Patent drawings, as explained above, support the conclusion that the pump and the valve disclosed in Claim 18 are separate structures. Furthermore, like the specification of the patent at issue in Becton, Dickinson, the specification of the '852 Patent does not suggest that the pump claimed in Claim 18 can itself contain the valve disclosed in the claim. Nothing in the specification indicates that the valve in Claim 18 is located inside of the pump. Thus, as in Becton, Dickinson, "the specification comports with the plain language of the claims, fully supporting the conclusion" that the valve and the pump are "separate structural component[s] of the patented invention." 616 F.3d at 1255.

As Powell shows, an accused device's single structure can conceivably satisfy a patent claim's separately claimed devices or components. But, to overcome the presumption implied by the plain claim language, the specification must support a conclusion that the single structure can

embody more than one device. Such support is absent here. Moreover, in Powell, the nature of the "cutting box" and "dust collection structure" elements of the patented invention meant that each element could perform its individual function even when contained in a single structure. In contrast here, as noted above, while the experts may be able to disassemble the "valve" components from the "pump" components of Pumps A-D, that is not how Pumps A-D operate in the real world. Instead, when used in the BPS System, the valves are internal to Pumps A-D and are part of the functioning of the pump. This is inconsistent with the valve limitation in Claim 18. In Powell, the design of the components of the cutting box in the accused device allowed the single structure to satisfy the independent functions of the two claim elements. In contrast here, Pumps A-D do not satisfy the independent functions of the two devices (the valve and the pump) because the design of each of those pumps is that the internal valve and pump work together to make the pump work efficiently to move or transfer the fluid.

In summary as to literal infringement, even when construing the evidence in a light most favorable to Plaintiff, neither the manually adjustable valves nor the internal pump valves satisfy every limitation in Claim 18 of the '852 Patent exactly. Thus, there is no literal infringement of Claims 18, 19, or 20 of the '852 Patent. Defendant's motion for summary judgment as to literal infringement is granted. Plaintiff's motion as to literal infringement is denied.

III. Infringement Under the Doctrine of Equivalents

Even if an accused device does not literally infringe, it may infringe under the doctrine of equivalents. Spectrum Pharm., Inc. v. Sandoz Inc., 802 F.3d 1326, 1337 (Fed. Cir. 2015). To establish infringement under the doctrine of equivalents, the patent holder must show that the accused product "performs substantially the same function in substantially the same way to

obtain the same result as the claim limitation." Id. (internal quotation marks omitted). Because each element in a patent claim is material to defining the scope of the patented invention, the doctrine of equivalents applies to individual claim elements, not to the invention as a whole.

Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997).

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial to one of ordinary skill in the art." DeMarini Sports, Inc. v. Worth, Inc., 239 F.3d 1314, 1331-32 (Fed. Cir. 2001). "[T]he question of insubstantiality of the differences is inapplicable if a claim limitation is totally missing from the accused device." Id. at 1332.

As the discussion regarding literal infringement indicates, the accused BPS System considered with Pumps A-D lacks a separate "valve" sufficient to satisfy Element 3 of Claim 18. Because that claim limitation is missing from the BPS System, there can be no infringement by the doctrine of equivalents. As to the manually adjustable valves, the limitation of Element 4 that the valve be directly connected to, and controlled by, the controller/activation mechanism is also missing. Thus, regardless of whether the internal valves or the manually adjustable valves are considered, as a matter of law there is no infringement under the doctrine of equivalents. Accordingly, I grant Defendant's motion for summary judgment, and deny Plaintiff's motion for summary judgment, as to infringement on Claims 18, 19, and 20 under the doctrine of equivalents.

IV. Remaining Issues and Motion

As noted at the beginning of this Opinion, both parties moved for summary judgment on issues related to the validity and enforceability of the '852 Patent. I see no need to address those

issues in light of my determination that there is no infringement. Instead, given my rulings, the validity and unenforceability issues are moot. As the Federal Circuit explained in a 2008 case:

In district court cases in which invalidity is asserted as a counterclaim, the Supreme Court has held that the question of validity does not become moot when there has been a determination of noninfringement. For that reason, it is ordinarily necessary for the district court, and this court on appeal, to address the counterclaim even if noninfringement has been found. Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 96, 113 S.Ct. 1967, 124 L.Ed.2d 1 (1993). Where invalidity is raised as an affirmative defense, however, it is not necessary for the reviewing court to address the validity issue. Id. at 93–94, 113 S.Ct. 1967; Lacks Indus., Inc. v. McKechnie Vehicle Components USA, Inc., 322 F.3d 1335, 1346 (Fed. Cir. 2003); Hill–Rom Co. v. Kinetic Concepts, Inc., 209 F.3d 1337, 1344 (Fed. Cir. 2000).

Solomon Techs., Inc. v. Int'l Trade Comm'n, 524 F.3d 1310, 1319 (Fed. Cir. 2008). Here, Defendant raised nineteen affirmative defenses but did not bring any counterclaims. Thus, the finding of noninfringement moots the invalidity and unenforceability issues. Additionally, in a separately filed motion, Defendant challenged Plaintiff's damages expert. That motion is now moot.

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CONCLUSION

Plaintiff's motion for summary judgment [96] is denied as to the issues of literal infringement and infringement under the doctrine of equivalents and is denied as moot as to all other issues. Defendant's motion for summary judgment [101] is granted as to the issues of literal infringement and infringement under the doctrine of equivalents and is denied as moot as to all other issues. Defendant's motion to strike the expert report of Serena Morones [81] is denied as moot.

IT IS SO ORDERED.

Dated this 8 day of December, 2015


Marco A. Hernandez
United States District Judge